BOROUGH OF COLCHESTER.

URBAN DISTRICT.

ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE YEAR

1909.

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AND

School Medical Officer.

PUBLIC HEALTH DEPARTMENT,
36 STANWELL STREET,
February 8th, 1910.

Report of the Medical Officer of Health for the Year 1909.

TO THE MAYOR, ALDERMEN, AND COUNCILLORS OF THE BOROUGH OF COLCHESTER.

SIR AND GENTLEMEN,

I have the honour to submit this my first Annual Report upon the health and sanitary conditions of the Borough for the year 1909.

POPULATION.

The population when estimated by the method of the Registrar-General to the middle of 1909 is 41,835. This gives an increase of 385 over that of last year.

During 1909 there have been 96 new houses erected. This, taking the average of 4·5 persons per house, gives an increase of 432. Probably the number of the population, as estimated by either of these methods, is a good deal at fault, as it is now eight years since the last census.

The natural increase—that is, the increase of births over deaths—was 482.

The estimated population for 1909 of 41,835 includes the Garrison and families living in barracks.

Colonel A. P. O'Connor has again kindly supplied the following details of the average daily strength of the Colchester Garrison for the year :—Officers 104, men 3,461, women 327, children 621, giving a daily total of 4,513, and an increase of 201 over the daily total for 1908.

The 96 new houses erected in the Borough are distributed as follows :—North Ward 9, South Ward 54, East Ward 15, and West Ward 18.

The area of the Borough is 11,324 acres.

BIRTHS.

The total number of births registered in 1909 was 998. This gives a birth-rate of 23·85 per 1,000 inhabitants. It is very gratifying that this is a slight increase over the rate of 1908, which was 23·55, though it is markedly below the average for the past 10 years, which is 25·07. Of the births in 1909 517 were males and 481 females. These were distributed in the different Wards thus :—North 174, South 363, East 238, West 223. 36 of the births were illegitimate—that is, 3·6 per cent. of the total births.

The Notification of Births Act, 1907, has not been adopted in the Borough.

DEATHS.

The total number of deaths registered in the Borough during 1909 was 516, and this gives a crude death-rate of 12·3 per 1,000. This rate is the crude rate, and needs correction, for certain residents have died away from home, and certain strangers have died in the Borough. In the former case ~~five~~ four residents died in institutions outside Colchester, and in the latter 25 non-residents died in the Borough. Thus adding and subtracting, the corrected number of deaths is 49~~5~~4. This gives a nett death-rate of 11·8.

The rate for 1908 was 11·65, and was the lowest recorded death-rate for Colchester. The average for the past ten years is 13·7 per 1,000 persons.

For comparison with other towns or districts the corrected death-rate must be employed. This is calculated upon the supposition that the same death-rate for men and women and for the different age periods would have occurred had Colchester the same age and sex distribution as that of the country as a whole.

This corrected death-rate for Colchester for 1909 is 12·5. In comparing this rate with other towns similarly only the corrected death-rate for that town should be considered.

Among the military population 34 deaths took place.

The table of deaths and death-rates for Colchester is again included this year in a similar form as last year.

Death-rates for years 1878-1909.

Year.	Population.	Number of registered deaths.	Death-rate per 1,000.		Death-rate for England and Wales.
			Crude.	Nett.	
1878... ...	27,806	580	20·85	—	21·6
1879 ...	28,010	538	19·20	—	20·7
1880... ...	28,220	533	18·88	—	20·5
1881 ...	28,505	488	17·12	—	18·9
1882... ...	29,080	564	19·39	—	19·6
1883 ...	29,660	478	16·11	—	19·6
1884... ...	30,250	575	19·01	—	19·7
1885 ...	30,854	562	18·21	—	19·2
1886... ...	31,470	635	20·18	—	19·5
1887 ...	32,086	526	16·39	—	19·1
1888... ...	32,665	557	17·05	—	18·1
1889 ...	33,387	529	15·84	—	18·2
1890... ...	34,050	581	17·06	—	19·5
1891 ...	34,650	540	15·6	—	20·2
1892... ...	35,000	622	17·76	—	19·0
1893 ...	35,364	499	14·11	—	19·2
1894... ...	35,730	434	12·14	—	16·6
1895 ...	36,096	719	19·9	—	18·7
1896... ...	36,490	520	14·2	—	17·1
1897 ...	36,843	577	15·6	—	17·4
1898... ...	37,222	625	16·79	16·1	17·5
1899 ...	37,605	601	15·9	15·1	18·2
1900... ...	37,991	597	15·7	15·2	18·2
1901 ...	38,383	643	16·7	16·4	16·9
1902... ...	38,778	555	14·3	13·2	16·2
1903 ...	39,300	536	13·64	12·7	15·4
1904... ...	39,700	670	16·87	15·8	16·2
1905 ...	40,120	539	13·43	12·5	15·2
1906... ...	40,540	537	13·2	12·5	15·4
1907 ...	40,970	514	12·6	12·25	15·0
1908... ...	41,450	515	12·4	11·65	14·7
1909 ...	41,835	516	12·3	11·8	14·5

With this table should be studied the table on page 21 giving the causes of, and ages at, death during 1909.

From this it is seen that the chief causes of death have been bronchitis and heart disease 57 each, phthisis 31, cancer 35, and diarrhœa 19. It is to be hoped that some of these may be reduced; particularly I would indicate phthisis and diarrhœa. Of the deaths from diarrhœa 18

occurred in infants under one year. I consider this number under the heading of infantile mortality. The deaths from phthisis are less in number than last year, and it may be expected that the constant education of those suffering from phthisis will so effectually prevent the spread of this disease, that eventually the number of deaths from consumption will be markedly diminished.

Deaths in Public Institutions :—

	Residents.	*Non-Residents.*	*Total.*
Essex County Hospital	28 ...	24 ...	52
Colchester Workhouse	55 ...	nil ...	55
Eastern Counties' Asylum	3 ...	1 ...	4
Mile End Infectious Hospital ...	1 ...	nil ...	1
	87	25	112

The ages of residents who died in or outside the Borough were as follows :—

89 or 17·97 per cent. under 1 year.
36 „ 7·27 „ over 1 year and under 5 years.
20 „ 4·04 „ „ 5 years „ 15 „
26 „ 5·25 „ „ 15 „ „ 25 „
160 „ 32·32 „ „ 25 „ „ 65 „
164 „ 33·15 „ „ 65 years and upwards.

The following table is included in order that comparison may be made between the rates under the several headings for Colchester and those for England and Wales as a whole, for the larger and for the smaller towns separately, and for England and Wales less these towns.

YEAR 1909.

	Annual Rate per 1,000 living.				Deaths under one year to 1,000 Births.
	Births.	Deaths.		Principal Epidemic Diseases.	
		Crude.	Corrected.		
England and Wales	25·6	14·5	14·5	1·12	109
76 great towns	25·7	14·7	15·6	1·42	118
143 smaller towns	24·8	13·9	14·5	1·08	111
England & Wales less the 219 towns	25·6	14·5	13·6	0·80	98
Colchester	23·85	12·3	12·5	0·28	89

Among the 143 smaller towns Colchester is included.

INFANTILE MORTALITY.

The total number of deaths of children under 1 year old was 89. The rate of infantile mortality is also 89. This means that out of every 1,000 children born in Colchester, 89 die before they reach the age of 1 year old. Last year the rate was 90. It is to be hoped that this number, though satisfactory, may in time be definitely reduced. Last year the rate for England and Wales was 120, but for Ilford and Leyton the rates were 80 and 77 respectively. The average for the previous ten years for Colchester is 119, but this is high, owing to the outbreak of infantile diarrhœa in 1904.

Referring again to Table IV. (page 21), it is apparent that more than half these babies die from diarrhœa, bronchitis, or premature birth. Table V. (page 22) gives a more exact

analysis of the causes of these deaths. From this table one sees that 30 children died under one month after birth, and that 21 of these 30 come under the headings premature birth, congenital defects, atrophy, etc., and need concern us no further at present. Of all the rest only nine died under one month, but before reaching one year 17 had died from some form of diarrhœa, and 11 from bronchitis. In 1908 only eight children under one year and over one month died from some form of diarrhœa, and it is very desirable that this number be not increased, and, if some form of home-visiting could be instituted, it might even be reduced, the greater part of these deaths being simply due to ignorance. In years when infantile diarrhœa becomes epidemic such visiting would be of the greatest value.

The infantile mortality rate for legitimate children was 86 per 1,000, for illegitimate children it was 166 per 1,000.

Infantile Diarrhœa.

During 1909 no epidemic diarrhœa occurred. The cases classified under Diarrhœal Diseases were scattered all through the year, no one month's returns showing more than four deaths from such a cause.

As in former years, circulars upon Infant Feeding and the Prevention of Diarrhœa have been sent to parents. Certain of these miss their destination owing to the parents having moved.

Similar information has been obtained about the feeding of infants as was obtained last year. All the babies included in this table are taken as between the ages of three and six months old, as when the table was compiled it was found that all but four came within this period, and these four were within a few days of it, and so have been included. In all 622 such enquiries have been made with the following results :—

Method of Feeding.	3 to 6 months old.	Per cent.
Breast fed entirely	431	69·3
,, and bread sop	14	2·3
,, and cow's milk	9	1·4
,, and food other than the above	32	5·1
Cow's milk alone	74	11·9
,, and other food	33	5·3
Condensed milk alone	12	1·9
,, with foods, etc.	16	2·6
No milk given	1	·2
	622	100·0

These numbers are very similar to those of last year. It is gratifying to find only one case in which no milk at all had been given, and had there not been five of such cases last year one would be inclined to think that the parent in this case misunderstood the enquiry.

Enquiries have been made as to the type of bottle used in 145 cases. In 45 of these bottles with a long rubber tube were used, i.e., 31·0 per cent.; this compares very favourably with the 37 per cent. of last year. In 100 cases the boat-shaped bottle was used, giving a percentage of 69, last year's percentage being 63. Some parents unfortunately insist upon using the long tube bottle. It is to be hoped that constant advice may induce them to give it up in favour of the much safer and more cleanly boat-bottle. It is unfortunate that chemists still stock the old and objectionable long tube bottle, but some parents insist upon having this type of bottle.

THE NOTIFIABLE INFECTIOUS DISEASES.

In the first of the two following tables is given the number of cases notified during the past ten years from 1900 to 1909 inclusive; and in the second the number of deaths from the chief infectious diseases in the same period :—

Infectious Diseases Notified 1900-1909.

	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909
Small Pox	0	1	3	24	1	0	0	0	0	0
Scarlet Fever ...	69	50	47	100	257	223	37	45	128	82
Diphtheria	87	287	162	54	56	60	29	18	41	29
Croup	4	1	0	1	0	0	0	0	0	0
Typhoid Fever ...	23	28	9	17	17	12	12	8	11	5
Typhus Fever ...	0	0	0	0	0	0	0	0	0	0
Erysipelas	68	48	25	46	38	38	51	24	22	22
Puerperal Fever	3	1	1	0	3	0	0	2	1	4
	254	416	247	242	372	333	129	97	203	142

Deaths from Infectious Diseases registered in the Borough, 1900-1909.

	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909
Small Pox	0	0	1	5	0	0	0	0	0	0
Scarlet Fever ...	1	0	1	1	6	3	1	0	1	1
Diphtheria & Croup ...	16	39	15	5	7	10	3	1	5	2
Typhoid Fever ...	3	4	2	2	4	2	2	0	2	0
Erysipelas	5	4	0	0	2	0	3	1	1	2
Puerperal Fever	2	1	0	0	2	0	0	4	0	2
Measles	2	29	2	6	12	0	9	1	9	6
Whooping Cough	4	14	10	7	17	5	19	10	7	3
Phthisis	59	52	62	45	48	49	36	45	47	39

Upon examining these one finds that the number of cases of scarlet fever varies considerably. A large number of cases in 1904 and 1905 produced a greatly diminished number in 1906 and 1907, this probably being due to a large number of children in 1906 and 1907 being immunised by a previous attack.

With diphtheria one finds a rather better result, the number of cases becoming gradually but definitely less up to 1908, when the number increased, but again definitely fell in 1909.

In the case of typhoid fever this table shows a very excellent result. In 1900 and 1901 there were 23 and 28 cases with three and four deaths, whereas in 1909 there were but five cases and no deaths.

SMALL POX.

No cases of small pox were notified during 1909.

SCARLET FEVER.

During 1909 82 notifications of Scarlet Fever have been received. This number is considerably less than that for 1908, but more than for 1907 or 1906. In the report for 1908 it

was noted that 54 cases came from Mile End, and this year, unfortunately, the outbreak has continued up to October 18th, there being a break of four weeks in June and another of six weeks during the last two weeks of July and all August, when no cases were notified. But despite these breaks, in September cases again occurred, but ceased on October 18th for over two months. In all 49 cases were notified from Mile End out of a total of 82.

As Dr. Savage remarked in his report last year, it appears that mild cases to which no doctor is called are the cause of this small but continuous outbreak.

Of the rest three were in the Eastern Counties' Asylum. There were no cases of Scarlet Fever among the military population.

Sixty-eight cases were removed to the Hospital, a percentage of 83, this is a much larger percentage than that of 1908, which was 75.

One death from Scarlet Fever occurred.

The average stay of Scarlet Fever patients in Hospital was 52 days.

DIPHTHERIA.

There has been a decided drop in the number of cases of this disease notified during 1909 when compared with the number for 1908. In 1908 41 notifications were received, in 1909 only 29. Of these 29 two died, one before the notification was received. There were no deaths from Diphtheria in the Mile End Hospital.

Five cases occurred amongst the military population with no deaths. At the end of October, within four days, three boys attending the Colchester Grammar School were notified as suffering from Diphtheria. They were all in the same class, and all the boys of this class were swabbed by the Medical Officer of Health and sent home, and kept at home until the results of the swabs were known. In this way two other cases were discovered. Owing to bacilli having occurred in the throat of a boy in another class, the swab having been sent by a medical man, another class was swabbed, and eventually another, and all the school boarders. In all 172 swabs were taken of boys attending the Grammar School, some of these were sent by medical men, but the majority were taken at the School. In this way six contacts were discovered and isolated. The school work was very slightly disorganised. In the case of the Preparatory Class, a small class of 10 boys, when the first cases occurred, the boys, after swabbing, were sent home for a fortnight, during which time the class-room was thoroughly disinfected. At the end of this time the class was re-opened and no more cases occurred. In the other classes the boys showing bacilli in their throats were isolated. The swabs were taken in the afternoon and the boys were sent home. The cultures were examined next morning and the results communicated to the Headmaster, who allowed the boys showing negative results to re-assemble, excluding the others. It is probable that the infection was spread from the Preparatory Class to the rest of the School from a habit of the boys of drinking direct from the water taps over the wash-hand basins. The taps were carefully disinfected and the habit strictly forbidden.

Before January 1st, 1910, all the cases were free from bacilli and all the contacts but two. Unfortunately certain cases of Diphtheria and also contacts, that is those who show the presence of Diphtheria bacilli in their throats without further signs or symptoms of the disease, do not clear so quickly as others. Of these cases there was one in Hospital during 1909 who showed the organisms for over three months, and two of the Grammar School contacts showed the bacilli after the end of the year.

Of the 29 cases 16 were removed to the Infectious Disease Hospital, a percentage of 55·4, and the average stay of these in the Hospital was 53 days.

TYPHOID FEVER.

Only five cases of typhoid fever were notified during 1909. Of these two were removed to the Isolation Hospital. In only one of these five was there any history of having eaten shell-fish; in this case others also had partaken of them with no ill result. One of these five later showed signs of tubercular peritonitis, and was removed to the Essex County Hospital. No case of typhoid was notified from the Military population. There were no deaths from typhoid.

MEASLES, WHOOPING COUGH, AND CHICKEN-POX.

During 1909 six deaths occurred from measles and three from whooping cough. In January and February the outbreak of measles at the end of 1908 still continued, but after these months the numbers grew less, and no more cases were notified from the schools after April, 1909, and the Borough has been free since that date.

Whooping cough has never been prevalent. During May 10 cases occurred, but beyond these only seven more have been reported in the rest of the year.

Chicken-pox has occurred throughout the year, but never to any great extent until the end of the year. In November nine cases were reported, and in December 22. These cases were all visited and verified.

TUBERCULAR DISEASE.

The number of deaths from tubercular disease during 1909 was 59. Of these 38 died from phthisis, and 21 from other tubercular disease. One death from phthisis was that of a non-resident. The following table shows the deaths from phthisis and other tubercular diseases for the past 14 years. It is satisfactory to find the death-rate from phthisis steadily falling.

Year.	Total Deaths from Phthisis.	Deaths from Phthisis amongst Residents and excluding Asylum cases.	Deaths from other varieties of Tuberculosis (excluding the Asylum deaths).	Phthisis Death-rate (excluding Asylum deaths).
1895 ...	70	56	—	1·56
1896 ...	58	52	—	1·43
1897 ...	51	42	—	1·31
1898 ...	63	55	—	1·49
1899 ...	56	46	—	1·23
1900 ...	59	52	—	1·38
1901 ...	52	49	—	1·28
1902 ...	62	50	21	1·29
1903 ...	45	36	11	0·91
1904 ...	48	41	17	1·03
1905 ...	49	44	12	1·09
1906 ...	36	32	20	0·79
1907 ...	46	44	12	1·07
1908 ...	47	45	11	1·08
1909 ...	38	38	21	0·90
Average for 10 years— 1899-1908	50	44	—	1·11

Though the total number of deaths from tubercular disease is higher than last year, the number of deaths from phthisis is less by ten. This is of importance, as phthisis is far the most dangerous form of tuberculosis from the point of view of spread of the disease.

The total number of cases of phthisis notified was 33. Of these two were military cases, and 31 from the civilian population. 21 cases were notified under the system of

voluntary notification, and 12 under the new Local Government Board Poor Law Order. The new Order appears to have made little difference as regards notification in Colchester, 34 cases having been voluntarily notified in 1908, and 51 in 1907.

Of the 31 civilian cases, 11 died during the year, and the remainder were kept under observation, Of the 11 who died—

2	died within	2	weeks	of notification.
3	„	3	„	„
2	„	4	„	„
1	„	7	„	„
2	„	3	months	„
and 1	„	6	„	„

Of the 38 phthisis deaths among residents, three were Military cases. Of the rest 16 were not notified at all, and 19 were notified, but of these 12 died within six months of notification, and four within the year; three were under observation for more than a year before death. No deaths from phthisis occurred in the Eastern Counties Asylum.

It is disappointing that half the number of deaths from phthisis were cases that had not been notified at all, or notified so late that preventive measures, to avoid the spread of infection, could hardly be introduced before the case had died. The whole aim and object of this notification is to so educate the sufferer that though he live at home and amongst his family he will not be a source of danger to them. Medical practitioners certainly do their best in advising the patient for his own good and that of the family in which he lives, but they can seldom do so with the same authority as a Medical Officer of Health. The Health Authority supplies a printed list of precautions that the patient can study at his leisure, and he can also obtain a pocket-spitting flask at the cost price of 5d. from the Public Health Offices.

INFECTIOUS DISEASES HOSPITAL.

During the year 88 patients have been admitted to the Infectious Diseases Hospital. The following table gives the number of cases of each disease admitted each month :—

Month.	Scarlet Fever.	Diphtheria.	Typhoid Fever.	Total.
January	10	4	0	14
February	3	1	0	4
March	7	1	0	8
April	12	2	0	14
May	6	1	0	7
June	6	2	0	8
July	6	0	0	6
August	2	1	1	4
September	7	1	1	9
October	5	2	0	7
November	1	1	0	2
December	3	0	0	3
Year 1909...	68	16	2	86

In addition, one diphtheria contact was admitted and a soldier thought to be suffering from scarlet fever, but who proved not to have the disease.

There were two cases of mixed infection at the Hospital during the year, one of scarlet fever and chicken pox, the other of scarlet fever and diphtheria.

MONTHLY NOTIFICATIONS.

Month.	Scarlet Fever.	Diphtheria	Typhoid Fever.	Erysipelas.	Puerperal Fever	Phthisis.	Total.
January ...	10	4	0	2	0	0	16
February	5	2	0	1	0	2	10
March ...	8	1	0	1	0	5	15
April ...	14	3	0	8	0	4	29
May ...	7	2	0	2	0	6	17
June ...	6	3	1	1	0	4	15
July ...	7	0	0	2	1	2	12
August	4	1	2	1	2	2	12
September	9	1	2	0	0	2	14
October	5	7	0	0	0	2	14
November	4	5	0	2	0	3	14
December	3	0	0	2	1	1	7
Year 1909	82	29	5	22	4	33	175

The percentage of cases removed to the Fever Hospital was as follows :—Scarlet fever 83 per cent., diphtheria 55 per cent., typhoid fever 40 per cent. There was only one death in the Hospital in 1909. This was from scarlet fever.

As in the rest of the Borough, the military population have had fewer cases of infectious disease, only six cases from them being admitted to the Hospital. These were five diphtheria and one case suspected of being scarlet fever, but proving not to be so.

There have been patients in the Hospital throughout the year.

During 1909 there has been no alteration in the accommodation at the Hospital; but the building of the new wards has been started, and they should be ready for use early in 1910. With these new wards there should be ample accommodation for some time to come, and it has been possible to convert one of the old wards into a proper discharge block, thus doing away with the bad system of discharging patients straight from an infectious ward. The new wards are of brick, and are being fitted with many modern improvements. Also one block of the new buildings is so built that doubtful cases can be separated from definitely infectious cases, and kept under observation; and similarly cases of double infection such as scarlet fever and chicken pox in the same case can be kept out of the general scarlet fever wards. Besides these, bath-rooms and better lavatories are being added to the existing brick wards. These will be of the greatest assistance to the proper nursing of the cases.

INQUESTS.

The Borough Coroner, Mr. H. Geoffrey Elwes, has again kindly supplied the following figures relative to inquests held in the Borough :—

Cause of Death.	Males.	Females.	Total.
Suicide while Insane	6	0	6
Accident or Misadventure ...	5	3	8
Drowning (Open Verdict)	2	0	2
Natural Causes	4	2	6
	17	5	22

Five inquests were held in respect of persons dying in the Borough but not being residents therein. Two inquests were held upon infants under one year of age, one being illegitimate. Forty-seven deaths in all were reported to the Coroner. In 22 an inquest was held; in 25, the Coroner, after preliminary inquiry, decided that no inquest was necessary.

PUBLIC HEALTH LABORATORY.

As in former years the Public Health Laboratory has been extensively used for the microscopical diagnosis of disease. In 1908, 431 swabs were examined for diphtheria bacilli; this year, 1909, 518 have been examined; the number was greatly increased towards the end of the year owing to the outbreak of diphtheria in the Grammar School. 204 swabs were sent by medical men in practice in the town, and 314 were taken by the Medical Officer of Health or under his directions. The results from these swabs were as follows:—Of those from medical men 64 contained diphtheria bacilli, and 140 did not. Of the others 94 showed diphtheria bacilli, and 220 were negative.

Eight specimens of blood were examined for the Typhoid re-action (Widal's Test). Of these three gave a positive result.

Tubercle bacilli were found in 15 out of a total of 47 specimens of sputum sent for examination. It is gratifying to find the total number of sputum specimens sent steadily increasing, whereas the number of those showing the presence of the bacillus does not. One examination when negative should never be taken as an absolute proof that a patient has not consumption, though of course when tubercle bacilli have been found the evidence may be taken as conclusive. It is always advisable that three or four specimens should be found negative before the case is considered to be not one of consumption, when other symptoms point to a possibility of the disease being present.

As was the case in 1908, samples from the Borough water supply, and a certain number of well water samples have been examined.

Milk samples have also been examined from different parts of the Borough.

WATER SUPPLY.

The Lexden supply has, as formerly, been regularly examined. The results throughout the year have been perfectly satisfactory, as shown in the following table:—

Date of Sampling.	Source.	Number of organisms developing per cubic centimetre at		Bacillus Coli.			Streptococci.		
		37°C.	21°C.	1c.c.	10c.c.	40c.c.	1c.c.	10c.c.	40c.c.
Jan. 13th, 1909	Artesian Well ...	175	Liquified, no count possible.	—	—	—	—	—	—
,, 13th, ,,	No. 2 Spring ...	385	360	—	—	—	—	—	—
,, 13th, ,,	Storage Reservoir	61	·62	—	—	—	—	—	—
Feb. 15th, ,,	,, ,,	275	...	—	—	—	—	—	—
March 11th, ,,	,, ,,	0	24	—	—	—	—	—	—
April 17th, ,,	,, ,,	1	40	—	—	—	—	—	—
May 17th, ,,	,, ,,	4	60	—	—	—	—	—	—
June 21st, ,,	,, ,,	0	182	—	—	—	—	—	—
July 14th, ,,	,, ,,	0	115	—	—	—	—	—	—
Sept. 10th, ,,	,, ,,	16	65	—	—	—	—	—	—
Oct. 15th, ,,	,, ,,	20	64	—	—	—	—	—	—
Nov. 10th, ,,	,, ,,	10	19	—	—	—	—	—	—
Dec. 18th, ,,	,, ,,	4	nil.	—	—	—	—	—	—

FOOD INSPECTION.

During 1909 the Medical Officer of Health visited all, or nearly all, the cow-sheds again. In several cases alterations were advised and carried out under his guidance. As Dr. Savage pointed out last year, it is very advisable that more care should be taken over the process of

milking. The cow and the milker's hands should both be a great deal cleaner than they appear to be from the amount of dirt and fœcal organisms present in practically every sample of milk. It is useless to put dirty milk into cans or bottles that have been carefully cleaned and sterilized.

In certain countries it is the custom to groom cows with even greater care than is given to horses. I fear that at present the milking of cows is undertaken under very different conditions judging from those one sees.

The Sanitary Inspector in his routine work regularly inspects all the Cowsheds, Dairies, and Milkshops, reporting upon any insanitary conditions or breach of the Regulations that he may come across.

The slaughter-houses of the Borough are visited constantly by the Sanitary Inspector. He is careful to vary both time and day of visiting, and occasionally is present during slaughtering. There is no special Meat Inspector, and the Sanitary Inspector has not a special certificate in meat inspection, but he has had a continuous experience of this class of work for the past 19 years.

During 1909 no meat was seized as being in an unsound condition, nor was any meat surrendered and destroyed with the consent of the owners.

A careful investigation was made by the Medical Officer of Health of all places in which brawn and other made food was stored, and occasional suggestions made for improvement. In this connection several grocery businesses were visited with a view to the investigation of methods and storing of foodstuffs, and the ventilation and cleanliness of such storerooms.

SALE OF FOOD AND DRUGS ACT.

The Public Analyst, Dr. W. G. Savage, has sent me the following classification of the samples he had submitted to him under the Sale of Food and Drugs Act, and the results of his analysis.

Samples.	Number of Samples.	Adulterated.	Nature of Adulteration.
Milk	44	6	Five, fat abstraction: 9, 10, 18·6, 7·6, 4 per cent. respectively. One, addition of Boron preservatives equivalent to ·08 per cent., = 7 grains of boric acid per pint.
Butter... ...	5		
Margarine	1		
Pepper ...	1		
Mustard	4		
Vinegar ...	4		
Coffee	2		
Baking Powder ...	1		
Arrowroot	2		
Sago	1	1	Consisted of tapioca.
Tapioca	2		
Flour	1		
Rice	2		
Sweets ...	2		
Beer	3		
Tinned Foods ...	4		
Temperance Wines ...	3		
Drugs	8		
	90	7	

The drugs consisted of compound liquorice powder 2, tincture iodine 1, ginger 2, tartaric acid 2, Blaud's pills 1,

In the five cases of fat abstraction from milk and in the case where tapioca was supplied for sago the vendors were warned, and no further proceedings taken.

In only one case was a prosecution instituted, that of the case of the addition of boron compounds. The amount added was equivalent to seven grains of boric acid per pint of milk. The case was very thoroughly gone into, and resulted in the defendant being fined £2, with costs £1 18s. 6d.

The above samples were taken under the Sale of Food and Drugs Act. Dr. Savage, in his last report, remarked that for certain articles of food the collection of informal samples would be advantageous. Certainly if the Medical Officer of Health were able to take and examine milk samples constantly throughout the year he would get a very excellent and important knowledge of the general standard of the milk of his district, and also any seasonal changes that might occur. Further, the milk directly after milking and as sold may be found to be very different, though both may be genuine according to the official standards. From the farm a sample of milk may be found to contain over 4 per cent. of fat, whereas from the milk vendor a sample of milk may be found to contain only 3 per cent. The analyst would return both samples as genuine, whereas there would be every reason to believe that fat had been abstracted from the milk after it had left the farm.

HOUSE-TO-HOUSE INSPECTION.

The table below shows the streets inspected and the defects found. On the whole the results are good with the exception of Vineyard Street, where in 77 houses 59 defects were discovered. The great importance of this form of inspection is in this instance very well exemplified.

Name of Street.	Number of Houses Inspected.	Premises in a Dirty Condition.	Defective Drains.	Choked Drains.	Defective Water Closets.	Defective Traps.	Number of Water Closets.	Number of Outside W.C.'s not supplied with water.	Premises without spouting, or spouting defective.	Premises Damp and Dilapidated.	Premises without a proper Water Supply.	Sink waste pipes direct to Drains.	Animals Improperly Kept.	Other Nuisances.	Separate Larder Accommodation.
South Street	71	2	0	3	2	0	71	55	5	0	0	1	0	12	11
Cedars Road ...	27	0	0	0	0	0	27	26	0	0	0	0	0	2	3
Stanwell Street ...	48	2	0	1	3	0	39	27	1	0	0	0	0	3	3
Stanwell Road ...	9	0	0	1	0	0	9	8	1	0	0	0	0	0	1
Park Road, Lexden ...	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Dorset Place ...	11	0	0	0	1	0	11	9	0	2	0	0	0	2	0
Golden Noble Hill ...	34	2	0	1	1	0	33	24	0	1	0	0	0	5	1
Princess Street (north)	6	0	0	0	0	0	6	6	0	0	0	0	0	3	1
Colne Bank Road ...	32	0	0	0	4	0	32	31	6	1	0	0	0	13	6
Essex Hall Road...	11	0	0	0	0	1	11	11	0	1	0	0	0	5	0
Belle Vue Road ...	36	0	0	0	0	3	36	26	0	0	4	0	0	6	14
Chapel Street ...	50	0	1	3	4	0	55	29	0	2	0	0	0	4	9
Myland Road... ...	71	0	2	1	5	1	68	21	2	1	0	0	8	24	41
Myland Street ...	86	2	1	0	8	0	73	60	9	6	0	0	0	19	30
Boxted Road, Myland	7	0	0	0	0	0	1	1	0	1	0	0	0	0	2
Studd's Lane, „	24	0	0	0	0	0	17	10	0	0	1	0	0	4	18
Leech's Lane, „	5	0	0	0	0	0	2	2	1	1	0	0	0	0	2
Mill Road, „	46	0	0	0	2	0	11	11	5	2	0	0	6	17	9
Vineyard Street ...	77	8	3	4	4	1	61	58	7	10	0	0	4	18	0
Totals	653	16	7	14	34	6	565	415	37	28	5	1	18	137	151

In all cases notices to abate the defects found were sent, and in practically every case complied with at once; those not yet complied with are still in hand. In 653 houses inspected, 303 defects were found; that is roughly some defect or another in nearly every other house.

The number of inspections made is larger by 105 houses than the number made last year.

It is unsatisfactory to find such a large proportion of houses with outside water-closets without any water supply. The closets are in certain places, particularly yards, used by several families living round the yard, and so it becomes no one's duty to keep them clean. It is to be hoped that many of such closets will be gradually done away with, and in any case endeavour should be made to have a proper water supply laid on to them.

FACTORIES, WORKSHOPS, WORKPLACES, AND HOMEWORK.

In comparison with last year the number of factory, workshop, and workplace inspections carried out increased by 20, and the number of defects found has also increased. This form of inspection is of great use, as is shown by the number of instances of want of cleanliness in the premises being the fault complained of. All defects have been remedied, or were in hand at the end of the year.

1.—Inspection.

Including Inspections made by Sanitary Inspectors.

Premises.	Number of	
	Inspections.	Written Notices.
Factories, including Factory Laundries	36	8
Workshops, including Workshop Laundries ...	306	50
Workplaces	25	8
Total	367	66

2.—Defects Found.

Particulars.	Number of Defects	
	Found.	Remedied.
Nuisances under the Public Health Acts:—		
Want of cleanliness	34	34
Want of ventilation	3	3
Overcrowding	1	1
Other nuisances	50	47
Sanitary accommodation — insufficient	1	1
Sanitary accommodation — unsuitable or defective	1	1
Sanitary accommodation — not separate for sexes ...	1	1
Total	91	88

3.—Home Work.

Nature of Work.	Outworkers' Lists, Section 107.								Notices served on Occupiers as to keeping or sending lists.	Inspections of Outworkers' premises.	Outwork in Infected Premises, Secs. 109, 110.	
	Lists received from Employers twice a year.			Lists received from Employers once a year.			Addresses of Outworkers received from other Councils	Addresses of Outworkers forwarded to other Councils.			Instances.	Orders made.
	Lists.	Outworkers. Contractors	Outworkers. Workmen.	Lists.	Outworkers. Contractors.	Outworkers. Workmen.						
Wearing Apparel	84	2	1910	6	0	17	28	1624	2	845	2	2
Sacks... ...	4	0	8	0	0	0	0	0	0	4	0	0
Furniture and Upholstery	10	0	16	0	0	0	0	0	0	9	0	0
Total ...	98	2	1934	6	0	17	28	1624	2	858	2	2

4.—Registered Workshops.

Class.	Number.
Workshops on the Register (s. 131) at the end of the year :—	
Bakehouses	49
Domestic Workshops	25
Laundries	6
Dressmakers' and Milliners' Workshops	86
Other Workshops	354
Total Number of Workshops on Register ...	520

5.—Other Matters.

Class.	Number.
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (s. 133) ...	12
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5) — Notified by H.M. Inspector	5
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5) — Reports (of action taken) sent to H.M. Inspector...	5
Underground Bakehouses (s. 101) :—	
Certificates granted during the year	0
In use at the end of the year	1

The total number of workshops on the register has again increased this year, the number now being 520, compared with 453 in 1908, an increase of 67. Though no doubt some of them are new workshops, yet the majority have been in existence some time, but have only recently been put upon the register.

RAINFALL RETURNS.

From the following table it is seen that in Colchester during 1909 there were 11 inches more rain than in 1908. The greatest depth in 24 hours during the year occurred on October 26th, when 1·42 inches of rain fell.

Month.	Total Depth (inches).		Greatest fall in 24 hours (at Osborne Street Depôt).		Number of days on which 0·01 ins. or more fell (at Osborne Street Depôt).	Rainfall for 1908 (at Osborne Street Depôt).
	Lexden.	Osborne St Depôt.	Depth.	Date.		
			ins.			
January	0·71	0·64	0·19	10th	11	0·60
February ...	1·31	1·26	0·70	9th	6	1·24
March	2·45	2·05	0·43	6th	20	1·35
April	1·56	1·41	0·45	29th	13	1·96
May	0·66	0·70	0·35	25th	8	0·91
June	4·30	3·96	0·53	12th	15	0·59
July	3·66	3·69	1·25	27th	13	3·08
August ...	2·50	2·88	0·81	25th	14	1·31
September	1·87	1·59	0·33	12th	14	0·58
October ...	4·15	3·89	1·42	26th	20	1·49
November	0·83	0·82	0·25	16th	9	0·94
December ...	3·81	3·63	0·75	20th	20	1·38
Total ...	27·81	26·52			163	15·43

The Sanitary Inspector reports as follows:—

I have the honour of submitting my Fourteenth Annual Report.

Complaints as to Nuisances. The number of complaints reported to me during the year have been 474. The greater number of these have been written complaints, many have also been verbal. Every complaint has been enquired into, the sanitary conditions of the premises examined, and all nuisances discovered promptly dealt with. Nuisances, the abatement of which requires structural alteration, are remedied by the owner in most instances. Where nuisances are caused by the occupier, such as a choked closet, the deposit of foul accumulations, and animals kept in a dirty condition, a notice is promptly served for the abatement, which usually has the desired effect. It is satisfactory to report that in no case was it necessary to institute legal proceedings to enforce the abatement of a nuisance, although some owners are very obdurate before carrying out the statutory notice served upon them.

Drainage Work and Supervision. As previously mentioned in my Annual Reports a considerable amount of drainage work is carried out yearly, and many visits are made to see that the work is properly carried out. Where any old drains have been abolished and a reconstruction of the drainage system has been carried out such work is finally tested before it is covered up.

Infectious Diseases and Disinfection, etc. Whenever a case of infectious disease is notified it is promptly visited by the Medical Officer of Health or myself, and if thought advisable under the instructions of the Medical Officer of Health the patient is removed to the Infectious Diseases Hospital. The premises are then thoroughly disinfected. In addition, from houses in which scarlet fever, enteric fever, or phthisis have occurred, the bedding and all articles which have been exposed to infection have been subject to steam disinfection.

During the year 1991 such articles were disinfected in this manner. I have informed the headmasters and mistresses of all the schools in the Borough of any house where an outbreak of disease has occurred, 636 notices were sent, and notices have been sent also to the superintendents of all the Sunday schools and Librarian. 121 library books have been disinfected during the year.

HOUSE TO HOUSE INSPECTION. During the year this method of inspection has been continued as in previous years, and a considerable portion of the older parts of the Borough has been completed. Tabulated particulars of the nuisances and defects discovered are enumerated in the report of the Medical Officer of Health, and it is by such inspection that many structural defects are discovered and subsequently remedied. In addition, houses in which cases of disease have been notified, or about which complaints have been received, have been inspected, the total number of houses inspected in the Borough during the year being 3,429.

Statement A gives in detail the various works carried out as the result of such inspection.

During the year, under the direction of the Medical Officer of Health, a special enquiry was made as to the sanitary condition of houses and premises in which were children under one year old, 622 houses being inspected. In a number of cases insanitary conditions were discovered, which were remedied after serving the usual informal notices.

THE REGISTERED COMMON LODGING HOUSES have been frequently visited; they are kept clean, and their general management is satisfactory.

TENTS, VANS, SHEDS, ETC. I have inspected a number of vans used as dwellings which have entered the Borough; sometimes from ten to fifteen vans accompanying a circus proprietor, who usually hires a piece of vacant land in the North or East part of the Borough where there is accommodation for such dwellers. No case of infectious disease was discovered among the persons occupying the vans.

Fried fish, ice cream, and other shops where food is kept, or stored, or exposed for sale, have been visited and inspected, as mentioned in previous reports.

STATEMENT A.

	Public Health Act.	Factory and Workshop Act.
Complaints received	469	5
Visits made to slaughterhouses	386	0
Visits made to bakehouses	5	126
Visits made to dairies and milkshops	221	0
Visits made to cowsheds	55	0
Workshops inspected	34	367
Workshops cleansed	5	34
Houses cleansed under Public Health Act	55	15
Houses disinfected	364	0
Overcrowding abated	10	8
Houses placed in habitable repair	4	0
Houses closed	7	0
Defective roofs repaired	33	8
Rain water pipes renewed, or gutters repaired	57	11
Privies converted into water-closets	1	0
Privies and water-closets repaired	52	11
New water-closets built	10	3
Water supply for closets provided	13	4
Defective water fittings for w.c.'s repaired	27	22
Filthy closets cleansed and limewashed	10	14

Closets unstopped	76	17
New closet pans or apparatus fixed	25	9
New floors laid or repaired in w.c.'s	15	5
New seats and risers fixed in w.c.'s	17	8
Drains unstopped	90	17
Drains repaired	15	4
Old drains abolished	17	1
New drains laid	23	4
Disconnection syphons fixed	5	2
Disconnection chambers built	5	2
Fresh air inlet pipes fixed	6	2
Foul air exit pipes fixed	8	2
Bell and other insanitary traps abolished	12	1
Trapped yard gullies fixed	38	4
Defective and insufficiently ventilated soil pipes	7	0
Sink waste pipes trapped or disconnected from drains	1	1
Bath and lavatory waste pipes trapped	4	0
Ashpits abolished	13	1
Ashbins provided	62	3
Manure and offensive matter removed	72	9
Defects reported to Borough Surveyor	63	1
Animals improperly kept or removed	77	20
Nuisances detected or reported	685	91
Nuisances abated	629	88
Notices served	702	66
Other nuisances abated	141	48
Yards paved	3	0
Summons taken out	1	0
Convictions	1	0
Samples of water taken for analysis	3	0
Wells sunk, cleansed, or repaired	1	2
Wells closed	3	1
Water supply provided for domestic purposes	23	2
Leaky taps repaired where drawing from public mains	25	17
Ventilation provided	14	3
Failure to affix abstract	0	12
Insufficient water closet accommodation	0	1
Insufficient or defective	0	1
Not separate for the sexes	0	1

DRAIN TESTING, STATEMENT B.

The following table shows the locality of sewer gas escapes :—

Into kitchens and sculleries	3
„ Basement kitchens	3
„ Cellars	1
„ External water closets	8
„ Internal water closets	6
„ Dining-rooms and other parts of house	2
From heads and joints of rain water pipes	1
„ Joints of soil pipes and vent pipes	38
„ Defective internal soil pipes	1
„ Defective drains	13
„ Defective set traps	10
„ Rat holes in yards	3

FACTORY AND WORKSHOP ACTS. A large amount of work has again been carried out by Mr. Humphrey, Assistant Inspector, under the above Acts. The number of workshops now on the register is 520, made up of the following: 49 bakehouses, 25 domestic workshops, 6 laundries, 86 dressmakers and milliners, 354 other workshops. There are also 71 factories and 78 work places, and 367 visits have been made to the above premises. The number of home workers' premises inspected is 858; this includes 757 tailoresses, 74 shirt makers, 7 bootmakers, 6 board tailors, 9 upholsterers, 4 sack repairers, and 1 basket maker.

The number of lists received under the Act is 98. Special lists are prepared twice a year giving the names and addresses of homeworkers residing outside the Borough. Such lists are sent to the Clerks of the Urban and Rural Councils to which they belong.

The number of homeworkers residing inside the Borough is 1910; outside, 1624.

I am,

Your obedient Servant,

THOMAS WELLS,

Sanitary Inspector.

Though my period of office has been very short during the year under consideration, yet I have much pleasure in reporting that the work of the Department, as carried out by the inspectors and office staff and the work of the nursing staff at the Isolation Hospital, was performed to my complete satisfaction.

I have the honour to be,

Your obedient Servant,

WALTER F. CORFIELD,

Medical Officer of Health.

TABLE I.

Vital Statistics of Whole District during 1909 and previous Years.

Year.	Population estimated to middle of each year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.	
				Under 1 Year of age.		At all Ages.						
		Number.	Rate.*	Number.	Rate per 1,000 Births registered.	Number.	Rate.*				Number.	Rate.*
1	2	3	4	5	6	7	8	9	10	11	12	13
1899 ...	37,605	985	26·1	133	135	601	15·9	101	32	0	569	15·1
1900 ...	37,991	1000	26·2	120	120	597	15·7	99	17	0	580	15·2
1901 ...	38,383	936	24·3	132	141	643	16·7	136	12	1	632	16·4
1902 ...	38,778	943	24·3	93	98	555	14·3	121	40	0	515	13·2
1903 ...	39,300	1021	25·97	128	124	536	13·64	102	38	1	499	12·7
1904 ...	39,700	1033	26·02	182	176	670	16·87	117	41	1	630	15·8
1905 ...	40,120	1037	25·85	97	93·5	539	13·43	116	37	0	502	12·5
1906 ...	40,540	969	23·9	125	129	537	12·2	114	32	3	508	12·5
1907 ...	40,970	999	24·38	84	84	517	12·6	105	18	3	502	12·25
1908 ...	41,450	976	23·55	88	90	515	12.4	122	32	0	483	11·65
Averages for years 1899-1908	39,484	990	25·07	118	119	571	14·4	113	30	1	542	13·7
1909 ...	41,835	998	23·85	89	89	516	12·3	112	25	4	495	11·8

* Rates in these columns are calculated per 1,000 of the estimated gross population.

NOTE.—The deaths included in Column 7 of this Table are the whole of those registered during the year as having actually occurred within the district or division. The deaths included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The "Public Institutions" to be taken into account for the purposes of these Tables are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums.

Total population at all ages, 38,373.
Number of inhabited houses, 7,771.
Average number of persons per house excluding the military population, 4·5.
Area of District in acres (exclusive of area covered by water), 11,324.

} At census of 1901.

TABLE III.

Cases of Infectious Disease notified during the Year 1909.

Notifiable Disease.	Cases Notified in Whole District.							Total Cases Notified in each Locality.				No. of Cases removed to Hospital from each Locality.				Total Cases removed to Hospital.
	At all Ages.	At Ages—Years.														
		Under 1	1 to 5	5 to 15	15 to 25	25 to 65	65 and upwards	North	South	East	West	North	South	East	West	
Small-Pox ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	29	1	5	16	5	2	...	4	12	4	9	2	7	3	4	16
Erysipelas ...	22	...	...	2	1	15	4	4	...	10	8	...	...	...	...	...
Scarlet Fever ...	82	...	15	47	16	4	...	57	3	14	8	51	2	13	2	68
Enteric Fever ...	5	...	...	1	4	...	...	...	1	1	3	...	...	1	1	2
Puerperal Fever	4	...	...	...	...	...	...	1	1	2	...	...	...	...	...	...
Phthisis	33	...	...	2	11	19	1	8	13	2	10	...	...	...	...	...
Voluntary Notifications .. 21 Poor Law Notifications .. 12																
Totals	175	1	20	68	37	44	5	74	30	33	38	53	9	17	7	86

Isolation Hospital—

Name and Situation—Mile End Infectious Diseases Hospital, Colchester.

Total available beds (including Small-Pox Hospital), 50.

Number of Diseases that can be concurrently treated, 4.

TABLE IV.

Causes of, and Ages at, Death during Year 1909.

Causes of Death.	Deaths at the subjoined Ages of "Residents" whether occurring in or beyond the District.							Deaths at all ages of "Residents" belonging to localities, whether occurring in or beyond the District.				Total Deaths whether of "Residents" or "non-Residents" in Public Institutions in the District.
	All Ages.	Under 1 Year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	North.	South.	East.	West.	
Measles	6	...	3	3	...	...	...	...	2	4	...	0
Scarlet Fever	1	...	1	...	...	...	...	1	...	...	...	1
Whooping Cough... ...	3	2	1	...	...	...	...	1	...	2	...	0
Diphtheria (including Membranous Croup)	2	...	2	...	...	...	...	...	1	...	1	1
Epidemic Influenza ...	3	...	...	...	...	1	2	...	1	2	...	0
Diarrhœa	19	18	...	...	...	...	1	6	10	1	2	0
Enteritis	3	2	1	...	...	...	...	...	2	...	1	0
Puerperal Fever	2	...	...	...	...	2	...	1	1	...	...	0
Erysipelas	2	...	...	...	...	1	1	...	...	2	...	1
Phthisis (Pulmonary Tuberculosis)	38	...	1	3	9	23	2	11	17	5	5	7
Other Tuberculous Diseases	21	5	9	4	1	2	...	8	7	4	2	6
Cancer, Malignant Disease ...	35	...	...	...	...	16	19	9	4	11	11	11
Bronchitis	57	13	7	...	...	11	26	15	23	10	9	15
Pneumonia	21	3	4	1	2	8	3	7	6	4	4	3
Pleurisy	1	...	...	...	...	1	...	1	...	...	...	0
Other Diseases of Respiratory Organs	3	...	...	...	...	3	...	...	1	...	2	2
Alcoholism, Cirrhosis of Liver	3	...	...	...	...	1	2	...	1	1	1	0
Premature Birth... ...	18	18	...	...	...	...	...	3	9	4	2	0
Diseases and Accidents of Parturition	1	...	...	...	...	1	...	...	...	1	...	0
Heart Diseases	57	...	...	2	3	27	25	12	18	11	16	14
Accidents	5	1	...	...	...	4	...	...	1	3	1	5
Suicides	5	...	...	...	1	4	...	1	2	...	2	1
Other Septic Diseases ...	8	...	...	3	3	2	...	1	4	1	2	8
All other Causes	181	27	7	4	7	53	83	53	56	36	36	37
All Causes	495	89	36	20	26	160	164	130	166	102	97	112

TABLE V.

Infantile Mortality during the Year 1909.

Deaths from stated Causes in Weeks and Months under One Year of Age.

Cause of Death.	Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under 1 Year.
All causes:																	
Certified	15	6	4	5	30	14	7	4	3	4	10	3	2	3	4	2	86
Uncertified	...	...	...	...	...	1	...	1	...	...	...	1	...	...	...	...	3
Common Infectious Diseases:																	
Whooping Cough	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	2
Diarrhœal Diseases:																	
Diarrhœa, all forms	...	...	...	1	1	3	1	...	2	...	1	...	...	...	...	...	8
Enteritis, Muco-enteritis, Gastro-enteritis	...	1	1	...	2	1	1	2	...	1	2	...	...	...	...	1	10
Gastritis, Gastro-intestinal Catarrh	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	2
Wasting Diseases:																	
Premature Birth	11	2	3	...	16	2	...	...	...	...	...	...	...	...	...	...	18
Congenital Defects	1	...	...	...	1	...	1	...	...	1	...	...	...	...	...	...	3
Atrophy, Debility, Marasmus	1	1	...	2	4	5	1	1	1	1	1	...	...	...	...	...	14
Tuberculous Diseases:																	
Tuberculous Peritonitis: Tabes Mesenterica	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2
Other Tuberculous Diseases	...	...	...	...	...	...	1	...	...	...	...	1	...	...	1	...	3
Meningitis (not Tuberculous)	...	...	...	...	...	1	...	...	...	...	...	1	...	...	1	...	3
Convulsions	2	2	...	...	4	1	1	...	...	...	...	1	...	...	...	...	7
Bronchitis	...	...	...	2	2	2	1	2	...	...	3	...	...	2	1	...	13
Pneumonia	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	3
Other Causes	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
	15	6	4	5	30	15	7	5	3	4	10	4	2	3	4	2	89

Population (estimated to middle of 1909)		41,835
Births in the Year	Legitimate	962
	Illegitimate	36
Deaths in the Year of	Legitimate infants	83
	Illegitimate „	6
Deaths from all causes at all ages		516

BOROUGH SURVEYOR'S REPORT

AND

WATERWORKS SUPERINTENDENT'S REPORT

FOR THE YEAR 1909.

BOROUGH ENGINEER'S AND SURVEYOR'S OFFICE,

TOWN HALL, COLCHESTER,

26th January, 1910.

I beg to submit my annual report upon the work done in this Department during the year 1909:—

DRAINAGE WORKS. Glazed stoneware sewer pipes have been laid as follows:

Clay Lane, Mile End	...	3,340	lineal feet of	15 inch.
Mill Road, Mile End	...	1,300	,, ,,	15 ,,
,, ,,	...	700	,, ,,	9 ,,
Across fields to new Asylum	...	720	,, ,,	15 ,,
Fitzwalter Road ...	...	712	,, ,,	9 ,,
Total	...	6,772		

The total length of sewers in the Borough is now 60 miles 403 yards.

Twenty manholes and one lamphole have been constructed.

BUILDINGS AND DRAINS. 110 plans have been submitted to the Council, representing:— 101 dwelling-houses, 6 public buildings, 11 workshops, 50 additions to buildings, and 33 other buildings.

Ninety-six dwelling-house and 72 other buildings have been erected.

About 142 houses, old and new, have been provided with new drains and sanitary fittings.

Buildings and drains have necessitated 968 inspections, and all new drains have been subjected to a water test before being passed for use.

NEW ROAD CONSTRUCTED:

Fitzwalter Road ... ... 230 yards lineal.

ROADS AND FOOTPATHS:

1,056 lineal feet of Granite Kerbing,
1,062 ,, ,, York Kerbing,
2,499 ,, ,, Granite, Ragstone, York and Concrete Block Channelling,
2,240 square yards of Cement Paving,
2,465 ,, ,, Tar Paving, and
313 ,, ,, Granite, York, Rag, and Concrete Block Crossings

have been laid in various parts of the Borough.

The main and other roads have been kept in good repair with Mountsorrel and Stoney Stanton Granite, Kentish Ragstone, Kentish Sifted Red Flints, and local stone, rolled in by steam rollers.

REMOVAL OF REFUSE, &C. The Council have caused to be removed:—

11,696 loads of house, trade, and garden refuse,
1,327 ,, sewage from deadwells,
1,270 ,, slops from street gullies,
8,834 ,, road scrapings, and
20,834 truck-loads of horse-droppings and refuse from streets and roads.

All refuse has been removed from the Camp and Barracks, and other Government properties, by the Contractor.

STREET AND ROAD WATERING. 10,657,450 gallons of water have been used for street and road watering, and road-making.

SEWERAGE OUTFALL WORKS. 433,089,180 gallons of sewage have been pumped into the tanks at the Sewerage Outfall Works, equal to an average daily flow of 1,186,546 gallons. After precipitation a residue has been left of 20,857¼ tons of liquid sewage, which has been treated with lime and reduced by pressing to 4,171½ tons, approximately, of portable manure, or sludge, nearly all of which has been disposed of to farmers and others in the Borough and district.

OIL TAR FOR THE PREVENTION OF DUST has been used on some of the main roads of the Borough, and the results are considered to be satisfactory. More of this Tar will, no doubt, be used during the coming summer.

ROAD WIDENING. St. Botolph's Hill, Bergholt Road, which was very narrow and dangerous, has been widened about 14 feet; the carriage-way is now 31 ft. 9 ins. wide, and the footpath 5 ft. 6 ins. The total cost of the work was £545 18s. 6d., 60 per cent. of which has been contributed by the County Council under their Contract for special improvements on main roads.

I am,

Your obedient Servant,

H. GOODYEAR,

Borough Engineer and Surveyor.

BOROUGH OF COLCHESTER,

WATERWORKS DEPARTMENT,

14th January, 1910.

I have pleasure in submitting the following particulars relating to the work done by my Department during the past year.

MAINS. The total lenth of the mains at the present time is nearly 50 miles. During last year they have been extended 287 yards ; and 447 yards of mains have been replaced by larger ones for fire extinguishment purposes.

HOUSES SUPPLIED. There are 9,036 houses (inhabited and uninhabited) connected with the Council's mains, exclusive of trade and business premises, factories, stables, and the whole of the Stanway Rural District supply. There are 211 houses in connection with the latter, which makes the total number, *exclusive of the Garrison*, 9,247.

NUMBER OF PERSONS SUPPLIED. Taking an average of four and a-half people per house (Government census return), and allowing for empty houses, it is estimated that a *civilian population* of 38,862 is furnished with a supply from the Council's Waterworks, and these figures do not include the Stanway Rural District Council or trade and business, &c., supplies.

Estimating the Stanway district at four and a-half people per house, the inhabitants supplied there numbered 949. The military population last year averaged 4,513, making a grand total of 44,324 using the water of the Council.

METERS. The total number of meters fixed in connection with trade and business purposes, garden watering. &c., is 219.

DEFECTIVE FITTINGS. During the year in question our Inspectors, in visiting properties for the purpose of waste detection, discovered leakages going on at 4,166 houses in consequence of defective pipes, fittings, &c.

The necessary repairs were executed gratuitously by our staff at 3,526 of these premises, and in the remaining 640 cases notices were forwarded to the owners, who caused the necessary repairs or renewals to be carried out.

QUANTITY OF WATER PUMPED. The quantity of water pumped into the Water Tauk, Balkerne Hill, was 295,983,750 gallons. This quantity does not include the surface spring water supplied by separate mains and reservoirs to the Great Eastern Railway Company's Colchester North Station, which amounted to 45,309,000 gallons. The total quantity of water pumped was, therefore, 341,292,750 gallons.

THE AVERAGE CONSUMPTION PER HEAD PER DAY for all purposes, including road watering and making, fire extinguishment, sewers, flushing, trade and business purposes, but excluding the G.E.R. Company's spring water supply, was 17'7 gallons per day.

I have pleasure in stating that the undertaking continues to prove a financial success.

I am,

Your obedient Servant,

CHAS. E. BLAND,

Superintendent.